

Pest Alert: European cherry fruit fly

Rhagoletis cerasi



Oregon
Department
of Agriculture

Introduction

European cherry fruit fly (ECFF), *Rhagoletis cerasi* (Diptera, Tephritidae), is one of the most important cherry pests in Europe. In 2016, ECFF was found in Ontario, Canada. The following year it was found in the United States in New York state adjacent to the Canadian border. So far, ECFF infestations have only been found in Niagara County (Carroll and Herrmann 2017). ECFF is established throughout Europe to the Middle East.

ECFF is a threat to cherries, one of Oregon's top 20 agricultural commodities valued at over \$70 million in 2017. Oregon is third in the nation in the production of sweet cherries. Home and organic cherry production are likely at the greatest risk.

The primary risk of introduction for ECFF is in infested fruit. This would include cherries, but also honeysuckle and snowberries from the infested area in eastern North America or Europe. There are restrictions on the movement of fruits into the US, but it is unknown how the population arrived in the US in the first place. The most likely pathway is fruit being brought into the US illegally in passenger luggage from Europe.

If the pest is allowed to remain established in northeastern US, the risk of ECFF being brought to cherry production areas in the West is greatly increased. California, Florida, and Hawaii are the only states in the US that regulate the movement of cherries by the general public. ECFF is still being regulated by USDA APHIS and efforts are underway to delimit the area of the infestation. The USDA, state and federal legislators, and other government representatives need to hear from interested parties to show support for the difficult and expensive task of eradicating this pest.



Adult European cherry fruit fly female. Image by Claudia Daniel, Research Institute of Organic Agriculture (FiBL).

Host Range

All cherries are potential hosts. Honeysuckle berries (*Lonicera* spp.) are also attacked, and there are records from snowberry (*Symphoricarpos* spp.).

Pest Status

This is the most important pest of cherries in Europe. If uncontrolled, they can destroy up to 100% of a cherry crop. Infested cherries are unmarketable. Control techniques would be similar to those for the native Western cherry fruit fly (WCFF), but there is evidence suggesting that they emerge earlier than the North American cherry fruit flies, potentially requiring additional sprays (Yee 2018). Their presence in OR could result in restrictions on shipping cherries to international markets or uninfested states.

What can you do?

The Oregon Department of Agriculture is not offering control suggestions at this time because ECFF is not known to occur in Oregon. We encourage interested individuals to contact their representatives to support USDA APHIS efforts to control this pest. If you believe you have found ECFF, notify ODA immediately. Early detection is vital. Please contact the Oregon Department of Agriculture at plant-entomologists@oda.oregon.gov or 503-986-4636.

Pest Alert: European cherry fruit fly

Rhagoletis cerasi

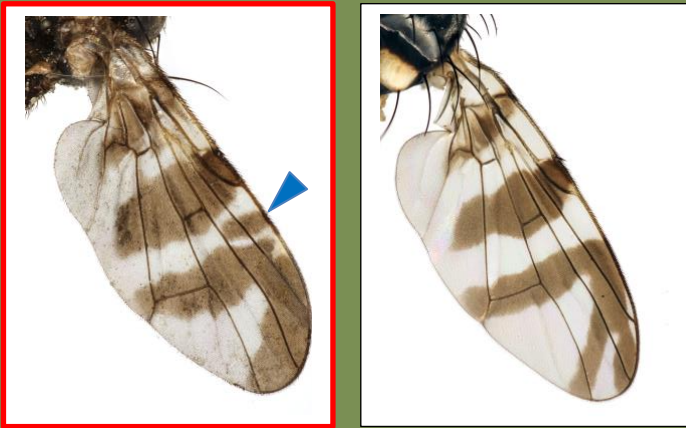


Oregon
Department
of Agriculture

Field Identification

Adult wings:

- ECFF has a short band at the middle of the wing (blue arrow) where WCFF does not.
- WCFF has the apical wing marking as a distorted “F” versus ECFF’s lower case “r”



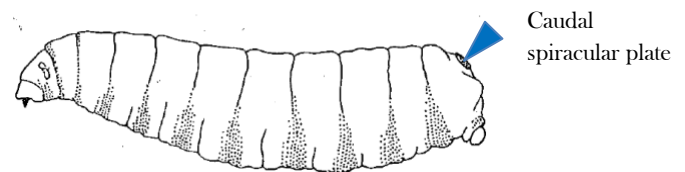
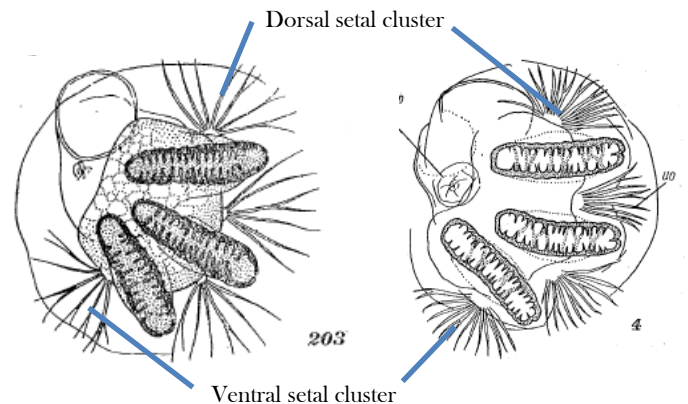
European cherry fruit fly wing (left) compared to Western cherry fruit fly wing (right)

Identification

Identification can be challenging since the Western cherry fruit fly is common in the region. WCFF causes the same damage to cherry fruit. Adults are fairly simple to tell apart (see field identification at the left). Larvae are more difficult, but unfortunately, are more likely to be encountered. There is one clear character for separating the larvae:

- ECFF has dorsal and ventral caudal spiracular plate setal clusters with 6-7 hairs.
- WCFF has dorsal and ventral caudal setal clusters with 9-14 hairs.

Please save suspect ECFF in alcohol and submit them to the ODA.



European cherry fruit fly spiracular plate (left) compared to Western cherry fruit fly (right). ECFF larva (below) showing location of caudal spiracular plate. From M.N. Kandybina, 1977 Larvae of fruit-infesting fruit flies (Diptera, Tephritidae) (in Russian). Leningrad, Nauka, 210pp.

References

Carroll, J. and Herrmann, T. 2017. European Cherry Fruit Fly. An Invasive Species and Exotic Pests document by the New York State Integrated Pest Management Program.
<https://ecommons.cornell.edu/handle/1813/53834> accessed August 24, 2018. 2pp.

USDA APHIS PPQ New Pest Response Guidelines: *Rhagoletis cerasi* (Linnaeus), European Cherry Fruit Fly. 2017. 55pp.

Yee, W. L. 2018. Efficacies of *Rhagoletis cerasi* (Diptera: Tephritidae) Traps and Ammonium Lures for Western Cherry Fruit Fly. Journal of Insect Science. 18(3):14:1-8.

For more information

Oregon Department of Agriculture
635 Capitol St. NE
Salem, OR 97301-2532
503-986-4636 or 1-800-525-0137
www.Oregon.gov/ODA



Oregon
Department
of Agriculture

